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***        User ID:            d26fmew                                   ***
***        User Name:          MARK E. WALLERSON                         ***
***        User Phone:         0003058581                                ***
***        Workstation Id:     WSHBUEUC                                  ***
***        Printer Id:         wemtptr                                   ***
***        Date:               Tue Feb  3 1998                           ***
***        Time:               14:47:34                                  ***
***        Job #              0212                                       ***
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*                                                         *
*           Welcome to MESSENGER (APS Text) at USPTO      *
*                                                         *
*                                        .                *
*      The USPTO production files are current through:    *
*      FEB 03 1998 for U.S. Patent Text Data.             *
*      FEB 03 1998 for U.S. Current Classification data.  *
*      FEB 03 1998 for U.S. Patent Image Data.            *
*                                                         *
*        * PLEASE USE 305-9000 FOR NEW TELEPHONE NUMBER * *
*                                                         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
* More U.S. patent data is now available on APS.  The new *
* USOCR file contains patents issued in 1970, plus some   *
* patents that were missing from the USPAT file.  See the *
* Patents News Folder under the Public Folders in e-mail for *
* more information on using the new file.  Thank you.     *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*  DISCLAIMER:                                            *
*  Neither the United States Government, nor any agency   *
*  thereof, nor any of their contractors, subcontractors or *
*  employees make any warranty, expressed or implied,    *
*  including any warranty of marketability of fitness for a *
*  particular purpose; nor assumes any legal liability or *
*  responsibility for any party's use, or the results of *
*  such, of the data.                                     *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*               Help Desk --> 703-305-9000               *
*                                                         *  *    The He
lp Desk is staffed for APS support 7 days/week.     *
*        Monday through Friday:       6:30am - 9:00pm     *
*        Saturday, Sunday, Holidays: 8:30am - 5:00 pm     *
*                                                         *
*     The Help Desk staff at this number will handle all APS *
*     related questions.                                  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*     >>>>>>>>>>>> NEW SUNDAY HOURS !!! <<<<<<<<<<<<<     *
*                                                         *
*     The APS is available:                          .   *
*            6:30am - 9:00pm Monday through Friday        *
*            7:30am - 5:00pm Saturday, Sunday, Holidays   *
*                                                         *
*       APS is unavailable Thanksgiving Day, Christmas Day, *
*       and New Year's Day.                               *
*                                                         *
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*              W E L C O M E     T O     T H E           *
*         U. S.   P A T E N T   T E X T   F I L E        *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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=> s bidirection## or bi(2a)direction##
           23190 BIDIRECTION##
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            50994 BI
           109088 BIS
           155621 BI
                      (BI OR BIS)
          1065487 DIRECTION##
            13527 BI(2A)DIRECTION##
L1          33980 BIDIRECTION## OR BI(2A)DIRECTION##

=> s print###(3a)status
           230419 PRINT###
            70087 STATUS
             1751 STATUSES
            70335 STATUS
                      (STATUS OR STATUSES)
L2           1216 PRINT###(3A)STATUS

=> s scan###(3a)status
           121116 SCAN###
            70087 STATUS
             1751 STATUSES
            70335 STATUS
                      (STATUS OR STATUSES)
L3            716 SCAN###(3A)STATUS

=> d his

       (FILE 'USPAT' ENTERED AT 14:42:18 ON 03 FEB 1998)
                  SET PAGE SCROLL
L1          33980 S BIDIRECTION## OR BI(2A)DIRECTION##
L2           1216 S PRINT###(3A)STATUS
L3            716 S SCAN###(3A)STATUS

=> s l1 and l2 and l3
L4             14 L1 AND L2 AND L3

=> d l4 1-14
```

1. 5,564,117, Oct. 8, 1996, Computer system including a page printer
controller including a single chip supercalar microprocessor with graphical
functional units; Derek J. Lentz, et al., 345/502; 395/101, 110 [IMAGE
AVAILABLE]

2. 5,559,951, Sep. 24, 1996, Page printer controller including a single chip
superscalar microprocessor with graphics functional units; Derek J. Lentz, et
al., 345/502; 395/101, 115 [IMAGE AVAILABLE]

3. 5,532,844, Jul. 2, 1996, Image data transferring system and method;
Yuichi Kagami, et al., 358/468, 442, 444; 364/238.2, 238.3, DIG.1; 395/821
[IMAGE AVAILABLE]

4. 5,394,515, Feb. 28, 1995, Page printer controller including a single chip
superscalar microprocessor with graphics functional units; Derek J. Lentz, et
al., 395/115; 345/502 [IMAGE AVAILABLE]

5. 4,977,529, Dec. 11, 1990, Training simulator for a nuclear power plant;
Gerald L. Gregg, et al., 364/578, 492; 376/245, 463 [IMAGE AVAILABLE]

6. 4,922,347, May 1, 1990, Apparatus for recording displayed video data;
Louis V. Galetto, et al., 358/296, 409; 386/121 [IMAGE AVAILABLE]

7. 4,736,255, Apr. 5, 1988, Recording apparatus; Kunihiko Miura, et al.,
358/300; 347/140; 902/21 [IMAGE AVAILABLE]

8. 4,729,038, Mar. 1, 1988, Recording apparatus capable of forming a shadow
print impression to characters; Kunihiko Miura, et al., 358/300; 347/247;
358/298, 443; 400/120.07 [IMAGE AVAILABLE]

9. 4,707,715, Nov. 17, 1987, Printing apparatus; Kunihiko Miura, 347/129,
139; 358/296; 399/151; 902/18 [IMAGE AVAILABLE]

10. 4,649,403, Mar. 10, 1987, Recording apparatus; Kunihiko Miura, 347/139;
346/145 [IMAGE AVAILABLE]

11. 4,647,950, Mar. 3, 1987, Recording apparatus; Takefumi Nosaki, et al.,
347/246, 253; 355/69 [IMAGE AVAILABLE]

12. 4,463,417, Jul. 31, 1984, Modular, processor-controlled document
distribution terminal; Kenneth A. Bushaw, et al., 358/442; 364/222.2, 222.3,
222.5, 228.3, 230, 230.4, 231.4, 231.5, 231.8, 232.7, 232.8, 232.9, 234, 235,
236.3, 237, 237.6, 238.3, 238.5, 242.6, 242.7, 247, 247.2, 247.8, 248.2,
260.4, 260.6, 260.81, 260.9, 263, 284, 284.3, DIG.1; 379/100.02; 380/4 [IMAGE
AVAILABLE]

13. 4,454,575, Jun. 12, 1984, Shared memory system with access by
specialized peripherals managed by controller initialized by supervisory CPU;
Kenneth A. Bushaw, et al., 345/433; 358/403, 468; 364/222.2, 222.3, 222.5,
228.4, 231.4, 231.5, 231.6, 231.7, 232.9, 235, 237.82, 238, 238.3, 238.4,
238.5, 240.5, 240.9, 241.2, 241.3, 241.9, 242.3, 242.31, 242.6, 242.7,
242.91, 242.94, 242.96, 254, 254.3, 259, 259.9, 260, 260.1, 260.4, 260.6,
260.81, 260.9, 263, 264, 264.1, 264.6, 280, 280.7, 281.3, 281.7, 284, 284.1,
286, 286.4, DIG.1; 380/18, 25, 49, 50; 395/878 [IMAGE AVAILABLE]

14. 4,141,078, Feb. 20, 1979, Library circulation control system; Louis E.
Bridges, Jr., et al., 235/375, 380, 385; 340/572; 364/918, 918.7, 919.4, 920,
920.6, 926.8, 927.2, 928, 930, 930.7, 931, 931.4, 932, 932.1, 932.5, 932.6,
940, 942, 947, 947.2, 948.2, 952, 952.1, 952.4, 952.5, 952.6, 965, 965.5,
DIG.2; 705/30 [IMAGE AVAILABLE]

=> d his

     (FILE 'USPAT' ENTERED AT 14:42:18 ON 03 FEB 1998)
                 SET PAGE SCROLL
L1   33980 S BIDIRECTION## OR BI(2A)DIRECTION##
L2   1216 S PRINT###(3A)STATUS
L3   716 S SCAN###(3A)STATUS
L4   14 S L1 AND L2 AND L3

=> s l4 and (computer or pc or (personal computer) or (workstation or work(2a)s
tation))
        191843 COMPUTER
         47749 COMPUTERS
        203921 COMPUTER
               (COMPUTER OR COMPUTERS)
         29697 PC
          2635 PCS
         31121 PC
               (PC OR PCS)
         44092 PERSONAL
            18 PERSONALS
         44097 PERSONAL

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                    (PERSONAL OR PERSONALS)
         191843 COMPUTER
          47749 COMPUTERS
         203921 COMPUTER
                    (COMPUTER OR COMPUTERS)
          21438 PERSONAL COMPUTER
                    (PERSONAL(W)COMPUTER)
           6987 WORKSTATION
           3875 WORKSTATIONS
           8451 WORKSTATION
                    (WORKSTATION OR WORKSTATIONS)
         315485 WORK
          74829 WORKS
         361799 WORK
                    (WORK OR WORKS)
         141778 STATION
          71160 STATIONS
         157743 STATION
                    (STATION OR STATIONS)
          14206 WORK(2A)STATION
L5           13 L4 AND (COMPUTER OR PC OR (PERSONAL COMPUTER) OR (WORKSTATION
                OR WORK(2A)STATION))


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